

GENES V

Benjamin Lewin

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relationship is usually called cold-sensitive).

Terminal redundancy describes the repetition of the same sequence at both ends of (for example) a phage genome.

Termination codon is one of three triplet sequences, UAG (amber), UAA (ochre), or UGA that cause termination of protein synthesis; they are also called 'nonsense' codons.

Terminator is a sequence of DNA, represented at the end of the transcript, that causes RNA polymerase to terminate transcription.

Tertiary structure of a protein describes the organization in space of its polypeptide chain.

Testcross involves crossing an unknown genotype to a recessive homozygote so that the phenotypes of the progeny correspond directly to the chromosomes carried by the parent of unknown genotype. **Thalassemia** is disease of red blood cells resulting from lack of either α or β globin.

Thymine dimer comprises a chemically cross-linked pair of adjacent thymine residues in DNA, a result of damage induced by ultraviolet irradiation.

Topoisomerase is an enzyme that can change the linking number of DNA (in steps of 1 by type I; in steps of 2 by type II).

Topological isomers are molecules of DNA that are identical except for a difference in linking number.

Tracer is a radioactively labeled nucleic acid component included in a reassociation reaction in amounts too small to influence the progress of reaction.

Trailer is a nontranslated sequence at the 3' end of an mRNA following the termination codon.

Trans configuration of two sites refers to their presence on two different molecules of DNA (chromosomes).

Transcribed spacer is the part of an rRNA transcription unit that is transcribed but discarded during maturation; that is, it does not give rise to part of rRNA.

Transcription is synthesis of RNA on a DNA template.

Transcription unit is the distance between sites of initiation and termination by RNA polymerase; may include more than one gene.

Transduction refers to the transfer of a bacterial

gene from one bacterium to another by a phage; a phage carrying host as well as its own genes is called transducing phage. Also describes the acquisition and transfer of eukaryotic cellular sequences by retroviruses.

Transfection of eukaryotic cells is the acquisition of new genetic markers by incorporation of added DNA.

Transformation of bacteria describes the acquisition of new genetic markers by incorporation of added DNA.

Transformation of eukaryotic cells refers to their conversion to a state of unrestrained growth in culture, resembling or identical with the tumorigenic condition.

Transgenic animals are created by introducing new DNA sequences into the germ line via addition to the egg.

Transit peptide is the short leader sequence cleaved from proteins that are imported into cellular organelles by post-translational passage of the membrane.

Transition is a mutation in which one pyrimidine is substituted by the other or in which one purine is substituted for the other.

Translation is synthesis of protein on the mRNA template.

Translocation of a chromosome describes a rearrangement in which part of a chromosome is detached by breakage and then becomes attached to some other chromosome.

Translocation of a gene refers to the appearance of a new copy at location in the genome elsewhere from the original copy.

Translocation of a protein refers to its movement across a membrane.

Translocation of the ribosome is its movement one codon along mRNA after the addition of each amino acid to the polypeptide chain.

Transmembrane protein is a component of a membrane; a hydrophobic region or regions of the protein resides in the membrane, and hydrophilic regions are exposed on one or both sides of the membrane.

Transplantation antigen is protein coded by a major histocompatibility locus, present on all